

REMARKS

Claims 1, 3 and 5 were pending in the application. Claims 1, 3 and 5 have been amended. Claims 6 and 7 have been added. No new matter has been introduced. Thus, claims 1, 3 and 5 to 7 are submitted for reconsideration at this time.

Interview of April 23, 2003

Applicants thank the Examiner for the interview of April 23, 2003 with Applicants' representative. During the interview, the pending rejection of claims 1, 3 and 5 under 35 U.S.C. §103(a) was discussed. No agreement was reached with respect to the pending claims 1, 3 and 5. Applicants have amended claims 1, 3 and 5 by way of this Amendment & Reply, and present new arguments that distinguish over the cited art as set forth in greater detail below.

Rejections Under 35 U.S.C. §103(a)

Claims 1, 3 and 5 stand rejected under 35 U.S.C. §103(a) as being unpatentable over European reference EP 0 840 361 A2 to Cheung ("Cheung" hereafter). Applicants respectfully traverse this rejection for at least the following reasons.

The present invention discloses a plasma CVD technique using silane and oxygen as material gases in order to prevent nitrogen components from being contained in an oxide film (see page 3, lines 3 to 4 of the as-filed specification). In a case where silane and oxygen are used, however, the reaction readily proceeds at ordinary temperatures even if no plasma exists, which produces a fine powder of SiO₂ in a chamber or a process gas inlet pipe (see page 3, lines 4 to 7 of the as-filed specification). The resultant SiO₂ powder leads to the presence of particles on a wafer, which is not desirable (see page 3, lines 7 to 8 of the as-filed specification). Thus, the presently claimed invention forms the silicon-oxide-based film *using an oxidizing gas containing nitrogen as a material gas* (in addition to other material gas components) in order to reduce or eliminate the production of the fine powder of SiO₂.

The Office Action alleges Cheung discloses a "nitrogen content of the surface of the silicon-oxide-based film [] made to about 0.1 atm % or less". However, Cheung fails to disclose or suggest the *claimed* nitrogen content of the surface, where a surface of the silicon-oxide-based film has a non-zero nitrogen content of 0.1 atm % or less. More specifically, Cheung discloses using nitrogen as a process gas, resulting in little or no nitrogen being incorporated in the resulting film (col. 19, lines 47 to 50). However, "little or no nitrogen" fails to anticipate the *claimed* non-zero nitrogen content of 0.1

atm % or less. Thus, the presently claimed invention is considered to be patentably distinct over Cheung. Allowance of claims 1, 3 and 5 is solicited.

New Claims

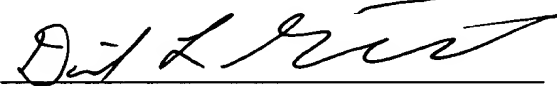
New claims 6 and 7 have been added to more fully recite features of the present invention. Support for new claim 6 can be found, for example, in original claim 2. Support for new claim 7 can be found, for example, on page 3, lines 9 to 13 and on page 9, lines 9 to 11 of the as-filed specification. New claims 6 and 7 are dependent upon claim 1, and are considered to be allowable for at least the aforementioned reasons with respect to claim 1, in addition to the further patentable features recited therein. Allowance of claims 6 and 7 is solicited.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable consideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

By 

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